

Boston University
ATLAS Mezzanine PCB Rev K
Assembly Notes
E. Hazen – 12 April 2001
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Attachments:

1. Top view of PCB
2. Bottom view of PCB
3. Protection subcircuit detail
4. Component list spreadsheet

Notes:

1. Install 3 wire jumpers as shown in Figure 1.
2. Install 6 components at locations PR1-PR12 (top and bottom) according to attached drawing "Protection Circuit Detail". *Be especially careful to avoid solder shorts in these areas as there is not solder mask.*
3. Install 40-pin blue header connector at J1 according to Figure 2.
Four pins must be flush-cut off the bottom of the connector at the left end before insertion.

4.

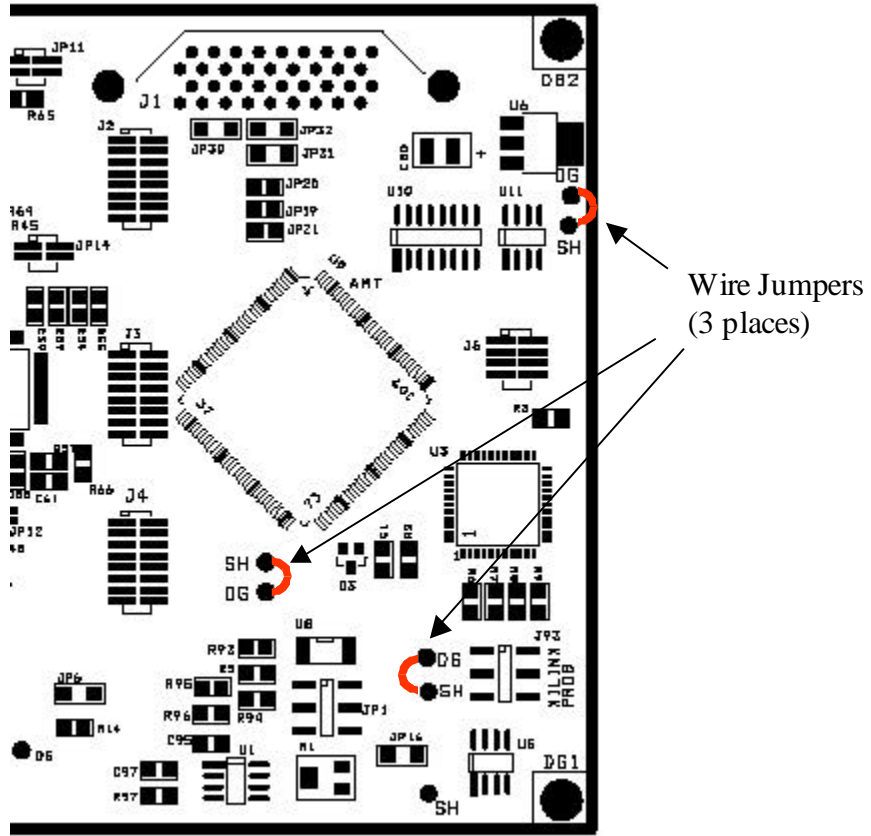


Figure 1. – Wire Jumpers

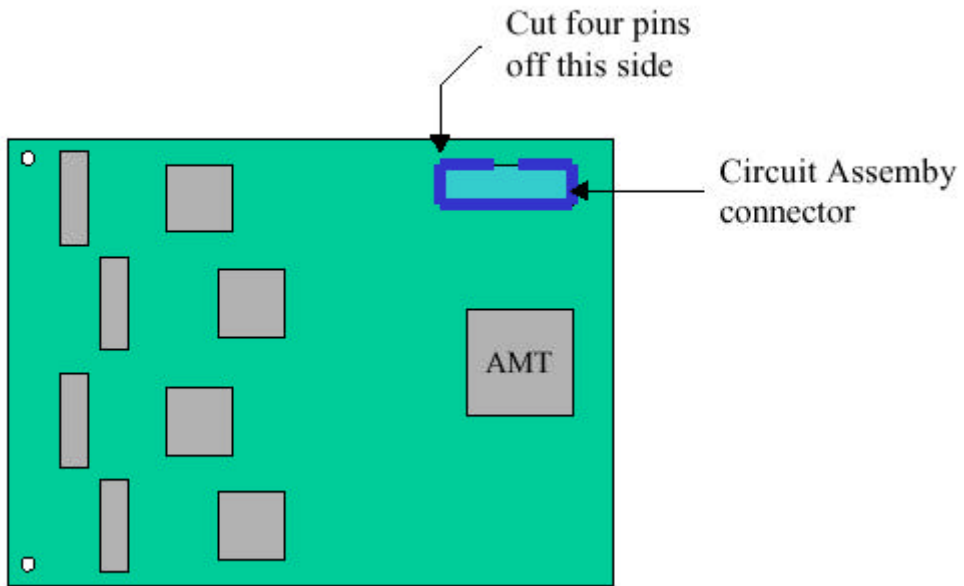
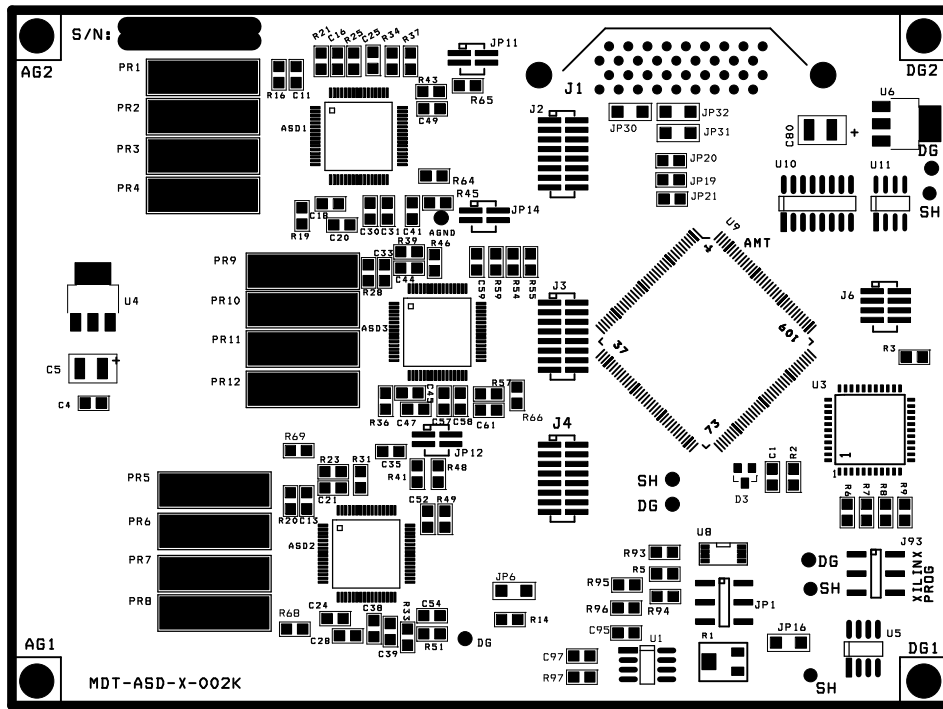
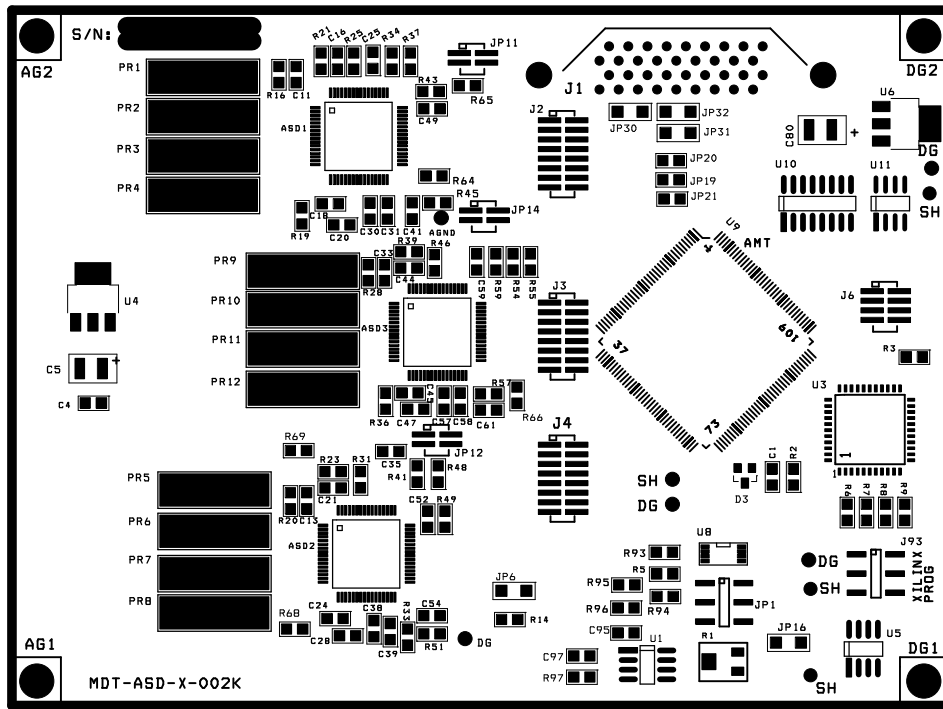


Figure 2. – 40 pin Header Installation

TOP SOLDER MASK TOP LEGEND

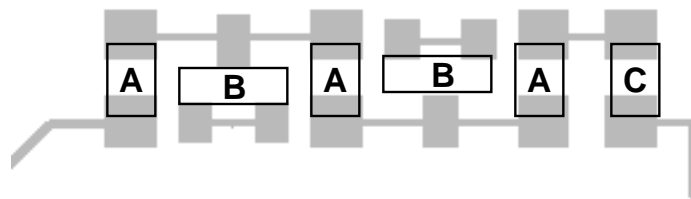
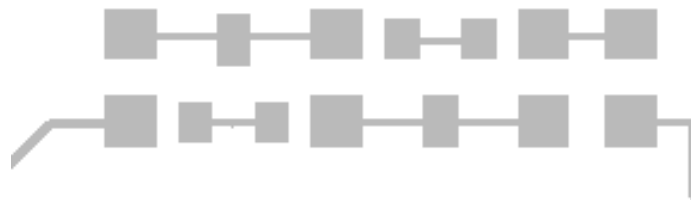


TOP SOLDER MASK TOP LEGEND



ATLAS MDT-ASD-X-002E

Protection Circuit Detail (typical of 6)



A - 20 ohm 0805 Resistor

B - BAV99 Diode

C - .01uF 0805 Capacitor

ATLAS Mezzanine PCB Rev K Component List						
12 April 2001 - E. Hazen <hazen@bu.edu>						
REF DES	VALUE	FOOTPRINT	XCOORD	YCOORD	ROTATION	BOARDSIDE
C1	0.01	SM/C_0805	4960.00 m	1016.00 m	270	TOP
C11	0.01	SM/C_0805	2480.00 m	3112.00 m	270	TOP
C12	0.01	SM/C_0805	2480.00 m	2838.00 m	270	BOTTOM
C13	0.01	SM/C_0805	2535.00 m	892.00 m	270	TOP
C14	0.01	SM/C_0805	2525.00 m	678.00 m	270	BOTTOM
C15	0.01	SM/C_0805	2592.00 m	3355.00 m	0	BOTTOM
C16	0.01	SM/C_0805	2695.00 m	3182.00 m	270	TOP
C17	0.01	SM/C_0805	2557.00 m	3260.00 m	0	BOTTOM
C18	0.01	SM/C_0805	2532.00 m	2565.00 m	180	TOP
C19	0.01	SM/C_0805	2695.00 m	2653.00 m	270	BOTTOM
C2	0.01	SM/C_0805	4360.00 m	42.00 m	90	BOTTOM
C20	0.01	SM/C_0805	2592.00 m	2455.00 m	180	TOP
C21	0.01	SM/C_0805	2798.00 m	1085.00 m	0	TOP
C22	0.01	SM/C_0805	2587.00 m	1085.00 m	0	BOTTOM
C23	0.01	SM/C_0805	2803.00 m	415.00 m	180	BOTTOM
C24	0.01	SM/C_0805	2557.00 m	405.00 m	180	TOP
C25	0.01	SM/C_0805	2880.00 m	3438.00 m	90	TOP
C26	0.01	SM/C_0805	2850.00 m	3207.00 m	90	BOTTOM
C27	0.01	SM/C_0805	2632.00 m	1180.00 m	0	BOTTOM
C28	0.01	SM/C_0805	2622.00 m	315.00 m	180	TOP
C29	0.01	SM/C_0805	2940.00 m	3207.00 m	90	BOTTOM
C30	0.01	SM/C_0805	2865.00 m	2653.00 m	90	TOP
C31	0.01	SM/C_0805	2955.00 m	2653.00 m	90	TOP
C32	0.01	SM/C_0805	2797.00 m	2470.00 m	0	BOTTOM
C33	0.01	SM/C_0805	2940.00 m	2080.00 m	270	TOP
C34	0.01	SM/C_0805	2930.00 m	1758.00 m	270	BOTTOM
C35	0.01	SM/C_0805	2847.00 m	1275.00 m	180	TOP
C36	0.01	SM/C_0805	2895.00 m	1022.00 m	90	BOTTOM
C37	0.01	SM/C_0805	2980.00 m	1022.00 m	90	BOTTOM
C38	0.01	SM/C_0805	2885.00 m	478.00 m	90	TOP
C39	0.01	SM/C_0805	2970.00 m	463.00 m	90	TOP
C4	0.01	SM/C_0805	1298.00 m	1528.00 m	180	TOP
C40	0.01	SM/C_0805	2852.00 m	325.00 m	0	BOTTOM
C41	0.01	SM/C_0805	3085.00 m	2402.00 m	270	TOP
C42	0.01	SM/C_0805	2977.00 m	2320.00 m	0	BOTTOM
C43	0.01	SM/C_0805	2937.00 m	2235.00 m	0	BOTTOM
C44	0.01	SM/C_0805	3193.00 m	2230.00 m	0	TOP
C45	0.01	SM/C_0805	2947.00 m	1580.00 m	180	TOP
C46	0.01	SM/C_0805	3193.00 m	1575.00 m	180	BOTTOM
C47	0.01	SM/C_0805	2977.00 m	1495.00 m	180	TOP
C48	0.01	SM/C_0805	3155.00 m	3428.00 m	270	BOTTOM
C49	0.01	SM/C_0805	3313.00 m	3060.00 m	0	TOP
C50	0.01	SM/C_0805	3160.00 m	2622.00 m	90	BOTTOM
C51	0.01	SM/C_0805	3273.00 m	1100.00 m	180	BOTTOM
C52	0.01	SM/C_0805	3165.00 m	1048.00 m	90	TOP
C53	0.01	SM/C_0805	3170.00 m	427.00 m	90	BOTTOM
C54	0.01	SM/C_0805	3313.00 m	420.00 m	0	TOP
C55	0.01	SM/C_0805	3240.00 m	2152.00 m	90	BOTTOM
C56	0.01	SM/C_0805	3325.00 m	2137.00 m	90	BOTTOM
C57	0.01	SM/C_0805	3250.00 m	1663.00 m	90	TOP
C58	0.01	SM/C_0805	3335.00 m	1663.00 m	90	TOP
C59	0.01	SM/C_0805	3420.00 m	2388.00 m	90	TOP
C60	0.01	SM/C_0805	3550.00 m	2383.00 m	270	BOTTOM
C61	0.01	SM/C_0805	3608.00 m	1490.00 m	0	TOP
C62	0.01	SM/C_0805	3540.00 m	1492.00 m	90	BOTTOM
C63	0.01	SM/C_0805	5342.00 m	1420.00 m	0	BOTTOM
C64	0.01	SM/C_0805	5160.00 m	2452.00 m	90	BOTTOM
C65	0.01	SM/C_0805	4846.00 m	1800.00 m	0	BOTTOM
C66	0.01	SM/C_0805	5706.00 m	2348.00 m	180	BOTTOM
C71	0.01	SM/C_0805	4300.00 m	1692.00 m	90	BOTTOM
C73	0.01	SM/C_0805	4660.00 m	1992.00 m	90	BOTTOM
C75	0.01	SM/C_0805	4482.00 m	1440.00 m	0	BOTTOM
C76	0.01	SM/C_0805	4742.00 m	1950.00 m	0	BOTTOM
C77	0.01	SM/C_0805	4368.00 m	1600.00 m	0	BOTTOM

C78	0.01	SM/C_0805	4652.00 m	1610.00 m	0	BOTTOM
C79	0.01	SM/C_0805	4540.00 m	1992.00 m	90	BOTTOM
C93	0.01	SM/C_0805	5724.00 m	2880.00 m	180	BOTTOM
C94	0.01	SM/C_0805	5566.00 m	248.00 m	180	BOTTOM
C95	0.01	SM/C_0805	4072.00 m	330.00 m	180	TOP
C97	0.01	SM/C_0805	3842.00 m	210.00 m	180	TOP
R16	1	SM/R_0805	2390.00 m	3112.00 m	270	TOP
R17	1	SM/R_0805	2390.00 m	2587.00 m	90	BOTTOM
R18	1	SM/R_0805	2440.00 m	427.00 m	90	BOTTOM
R20	1	SM/R_0805	2450.00 m	892.00 m	270	TOP
R21	1	SM/R_0805	2610.00 m	3182.00 m	270	TOP
R22	1	SM/R_0805	2610.00 m	2402.00 m	90	BOTTOM
R23	1	SM/R_0805	2798.00 m	1170.00 m	0	TOP
R24	1	SM/R_0805	2552.00 m	320.00 m	0	BOTTOM
R28	1	SM/R_0805	2856.00 m	2080.00 m	270	TOP
R29	1	SM/R_0805	2845.00 m	1507.00 m	90	BOTTOM
R38	1	SM/R_0805	3065.00 m	3172.00 m	90	BOTTOM
R39	1	SM/R_0805	3193.00 m	2315.00 m	0	TOP
R40	1	SM/R_0805	2942.00 m	1490.00 m	0	BOTTOM
R42	1	SM/R_0805	3022.00 m	1195.00 m	0	BOTTOM
R43	1	SM/R_0805	3308.00 m	3150.00 m	0	TOP
R44	1	SM/R_0805	3255.00 m	2622.00 m	90	BOTTOM
R45	1	SM/R_0805	3343.00 m	2570.00 m	0	TOP
R49	1	SM/R_0805	3255.00 m	1048.00 m	90	TOP
R50	1	SM/R_0805	3260.00 m	427.00 m	90	BOTTOM
R51	1	SM/R_0805	3313.00 m	325.00 m	0	TOP
R56	1	SM/R_0805	3430.00 m	2132.00 m	90	BOTTOM
R57	1	SM/R_0805	3608.00 m	1575.00 m	0	TOP
R59	1	SM/R_0805	3520.00 m	2388.00 m	90	TOP
R60	1	SM/R_0805	3630.00 m	1442.00 m	90	BOTTOM
R34	50	SM/R_0805	2980.00 m	3182.00 m	270	TOP
R37	50	SM/R_0805	3075.00 m	3182.00 m	270	TOP
R41	50	SM/R_0805	3110.00 m	1284.00 m	90	TOP
R48	50	SM/R_0805	3220.00 m	1284.00 m	90	TOP
R52	50	SM/R_0805	3300.00 m	3488.00 m	270	BOTTOM
R53	50	SM/R_0805	3420.00 m	3488.00 m	270	BOTTOM
R54	50	SM/R_0805	3610.00 m	2388.00 m	90	TOP
R55	50	SM/R_0805	3700.00 m	2388.00 m	90	TOP
R58	50	SM/R_0805	3130.00 m	1458.00 m	270	BOTTOM
R61	50	SM/R_0805	3220.00 m	1458.00 m	270	BOTTOM
R62	50	SM/R_0805	3730.00 m	2388.00 m	270	BOTTOM
R63	50	SM/R_0805	3820.00 m	2132.00 m	90	BOTTOM
R95	51	SM/R_0805	4328.00 m	580.00 m	0	TOP
R96	51	SM/R_0805	4072.00 m	460.00 m	180	TOP
C5	10 UF	EIAB	1471.07 m	1707.05 m	180	TOP
C80	10 UF	EIAB	5270.00 m	2950.00 m	180	TOP
R14	10K	SM/R_0805	3466.00 m	400.00 m	180	TOP
R3	10K	SM/R_0805	5574.00 m	1768.00 m	180	TOP
R6	10K	SM/R_0805	5350.00 m	832.00 m	270	TOP
R7	10K	SM/R_0805	5450.00 m	832.00 m	270	TOP
R8	10K	SM/R_0805	5550.00 m	832.00 m	270	TOP
R9	10K	SM/R_0805	5650.00 m	832.00 m	270	TOP
R97	10K 1%	SM/R_0805	3842.00 m	100.00 m	180	TOP
R1	10K POT	MULTI-TURN SMT POT	4780.00 m	230.00 m	270	TOP
R64	12K	SM/R_0805	3072.00 m	2710.00 m	180	TOP
R65	12K	SM/R_0805	3246.00 m	3180.00 m	180	TOP
R66	12K	SM/R_0805	3630.00 m	1694.00 m	90	TOP
R67	12K	SM/R_0805	3638.00 m	2134.00 m	90	BOTTOM
R68	12K	SM/R_0805	2598.00 m	350.00 m	0	TOP
R69	12K	SM/R_0805	2618.00 m	1280.00 m	0	TOP
R10	1K	SM/R_0805	4728.00 m	3490.00 m	180	BOTTOM
R11	1K	SM/R_0805	3686.00 m	3430.00 m	0	BOTTOM
R2	2K	SM/R_0805	5070.00 m	1268.00 m	90	TOP
R5	3K	SM/R_0805	4526.00 m	638.00 m	0	TOP
R93	4.7K	SM/R_0805	4272.00 m	750.00 m	180	TOP
R94	4.7K	SM/R_0805	4528.00 m	520.00 m	0	TOP
R25	50K	SM/R_0805	2780.00 m	3182.00 m	270	TOP
R26	50K	SM/R_0805	2780.00 m	2648.00 m	270	BOTTOM
R31	50K	SM/R_0805	2815.00 m	1002.00 m	270	TOP
R32	50K	SM/R_0805	2810.00 m	483.00 m	270	BOTTOM

R46	50K	SM/R_0805	3200.00 m	2132.00 m	270	TOP
R47	50K	SM/R_0805	3195.00 m	1668.00 m	270	BOTTOM
PR1	Protection Subcircuit [1]	PR3	1750.00 m	3270.00 m	0	TOP
PR10	Protection Subcircuit [1]	PR3	2270.00 m	2060.00 m	0	TOP
PR11	Protection Subcircuit [1]	PR3	2270.00 m	1855.00 m	0	TOP
PR12	Protection Subcircuit [1]	PR3	2270.00 m	1645.00 m	0	TOP
PR2	Protection Subcircuit [1]	PR3	1750.00 m	3065.00 m	0	TOP
PR3	Protection Subcircuit [1]	PR3	1750.00 m	2860.00 m	0	TOP
PR4	Protection Subcircuit [1]	PR3	1750.00 m	2655.00 m	0	TOP
PR5	Protection Subcircuit [1]	PR3	1810.00 m	1120.00 m	0	TOP
PR6	Protection Subcircuit [1]	PR3	1810.00 m	905.00 m	0	TOP
PR7	Protection Subcircuit [1]	PR3	1810.00 m	685.00 m	0	TOP
PR8	Protection Subcircuit [1]	PR3	1810.00 m	480.00 m	0	TOP
PR9	Protection Subcircuit [1]	PR3	2270.00 m	2260.00 m	0	TOP
C96	6.8NF	SM/R_1206	4460.00 m	2300.00 m	0	BOTTOM
U9	AMT1	QUAD.50M/144/WG22.60	4613.64 m	1848.81 m	225	TOP
ASD1	ASDCHIP	ASD1 (64PIN TQFP)	2580.00 m	3065.00 m	0	TOP
ASD2	ASDCHIP	ASD1 (64PIN TQFP)	2620.00 m	890.00 m	0	TOP
ASD3	ASDCHIP	ASD1 (64PIN TQFP)	2990.00 m	2045.00 m	0	TOP
ASD4	ASDCHIP	ASD1 (64PIN TQFP)	2990.00 m	1750.00 m	180	BOTTOM
ASD5	ASDCHIP	ASD1 (64PIN TQFP)	2580.00 m	2770.00 m	180	BOTTOM
ASD6	ASDCHIP	ASD1 (64PIN TQFP)	2620.00 m	595.00 m	180	BOTTOM
D3	BAS16 DIODE	SM/SOT23_123	4706.00 m	1031.00 m	180	TOP
J93	CON14	TSM-103-SAMTEC	5400.00 m	740.00 m	0	TOP
J2	CON16	FTS-108-SAMTEC	3800.00 m	3000.00 m	270	TOP
J3	CON16	FTS-108-SAMTEC	3800.00 m	2050.00 m	270	TOP
J4	CON16	FTS-108-SAMTEC	3800.00 m	1310.00 m	270	TOP
J1	CON36	MDR36	4060.00 m	3310.00 m	180	TOP
JP1	CON6AP	TSM-103-SAMTEC	4610.00 m	590.00 m	0	TOP
J6	CON8	FTS-104-SAMTEC	5480.00 m	2110.00 m	270	TOP
JP11	HEADER 6	FTS-102-SAMTEC	3330.00 m	3350.00 m	270	TOP
JP12	HEADER 6	FTS-102-SAMTEC	3144.00 m	1364.00 m	270	TOP
JP14	HEADER 6	FTS-102-SAMTEC	3390.00 m	2530.00 m	270	TOP
JP30	JUMPER	SM/R_1206	4415.00 m	3045.00 m	0	TOP
JP31	JUMPER	SM/R_1206	4275.00 m	2935.00 m	180	TOP
JP32	JUMPER	SM/R_1206	4275.00 m	3045.00 m	180	TOP
JP6	JUMPER	SM/R_1206	3810.00 m	550.00 m	0	TOP
JP19	JUMPER / 0-OHM	SM/R_0805	4558.00 m	2690.00 m	0	TOP
JP21	JUMPER / 0-OHM	SM/R_0805	4312.00 m	2590.00 m	180	TOP
U4	LM2937 - 3.3	SM/SOT223_1234	1692.00 m	2436.00 m	0	TOP
U6	LM2937 - 5	SM/SOT223_1234	6016.00 m	2712.00 m	270	TOP
U8	MAX550A	MAX550	4610.00 m	780.00 m	0	TOP
U1	OP 484	8-PIN SOIC	4602.00 m	-460.00 m	270	TOP
R19	R	SM/R_0805	2510.00 m	2628.00 m	90	TOP
R27	R	SM/R_0805	2530.00 m	3368.00 m	270	BOTTOM
R30	R	SM/R_0805	2968.00 m	1275.00 m	180	BOTTOM
R33	R	SM/R_0805	3060.00 m	182.00 m	270	TOP
R35	R	SM/R_0805	2935.00 m	2152.00 m	90	BOTTOM
R36	R	SM/R_0805	2945.00 m	1663.00 m	90	TOP
JP10	SAMTEC 16	16PIN SMT/TH SAMTEC100_REV1	1915.00 m	2240.00 m	0	BOTTOM
JP8	SAMTEC 16	16PIN SMT/TH SAMTEC100_REV1	1325.00 m	3270.00 m	0	BOTTOM
JP9	SAMTEC 16	16PIN SMT/TH SAMTEC100_REV1	1325.00 m	1100.00 m	0	BOTTOM
U11	SN65LVDS9638D	SOG.050/8/WG.244/L.200	5575.00 m	2568.00 m	0	TOP
U10	SN65LVDT3486A	SOG.050/16/WG.244/L.400	5720.00 m	2862.00 m	0	TOP
U5	TEMP_TRANS_2	8-PIN SOIC	6060.00 m	542.00 m	0	TOP
U3	XC9572_PC44	VQ44	5310.00 m	1170.00 m	0	TOP